

ABSTRACT

The present invention includes a detection unit for detecting an active virtual channel of arriving ATM cells, and a management memory unit for managing management information about the detected active virtual channel on a virtual-channel-to-virtual-channel basis, wherein a frame-by-frame process is performed on cells whose virtual channel identifier matches that of an active virtual channel managed by the management memory unit. In this manner, virtual-channel-by-virtual-channel processing is achieved in ATM leased line services that are provided on a virtual-path-by-virtual-path basis, thereby dispensing with needs to register a virtual channel into management memory in advance and allowing a large number of virtual channels to be accommodated.